Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL QUALITY MEASURES CLEARINGHOUSE

General

Title

Stroke: percentage of ICH stroke patients with an INR value greater than 1.4 at hospital arrival who are treated with a procoagulant reversal agent.

Source(s)

The Joint Commission. Disease-specific care certification program. Comprehensive stroke: performance measurement implementation guide. Oakbrook Terrace (IL): The Joint Commission; 2015 Mar. 278 p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of intracerebral hemorrhage (ICH) stroke patients with an international normalized ratio (INR) value greater than 1.4 at hospital arrival who are treated with a procoagulant reversal agent (i.e., fresh frozen plasma, recombinant factor VIIa, prothrombin complex concentrates)

Rationale

Intracerebral hemorrhage (ICH) is a life-threatening disorder. Patients receiving oral anticoagulants (OACs), as well as those with an acquired or congenital coagulopathy, are at increased risk for ICH and hemorrhagic expansion with warfarin-associated bleeds comprising 12% to 15% of all spontaneous hemorrhages. Prompt international normalized ratio (INR) reversal with intravenous infusions of vitamin K and fresh-frozen plasma (FFP) has been historically recommended; however, normalization with prothrombin complex concentrates (PCCs) is increasingly recommended because several studies have

shown that these agents can rapidly normalize the INR within minutes. According to the European Union Stroke Initiative (EUSI), patients with oral anticoagulation treatment (OAT) associated ICH and an INR above 1.4, should have OAT discontinued and the INR normalized with PCCs or FFP in addition to intravenous infusion of vitamin K.

Evidence for Rationale

Ansell J, Hirsh J, Hylek E, Jacobson A, Crowther M, Palareti G. Pharmacology and management of the vitamin K antagonists: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). Chest. 2008 Jun;133(6 Suppl):160S-98S. [419 references] PubMed

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Hanley JP. Warfarin reversal. J Clin Pathol. 2004 Nov;57(11):1132-9. PubMed

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Pabinger I, Brenner B, Kalina U, Knaub S, Nagy A, Ostermann H, Beriplex P/N Anticoagulation Reversal Study Group. Prothrombin complex concentrate (Beriplex P/N) for emergency anticoagulation reversal: a prospective multinational clinical trial. J Thromb Haemost. 2008 Apr;6(4):622-31. PubMed

RÃ¥dberg JA, Olsson JE, RÃ¥dberg CT. Prognostic parameters in spontaneous intracerebral hematomas with special reference to anticoagulant treatment. Stroke. 1991 May;22(5):571-6. PubMed

Riess HB, Meier-Hellmann A, Motsch J, Elias M, Kursten FW, Dempfle CE. Prothrombin complex concentrate (Octaplex) in patients requiring immediate reversal of oral anticoagulation. Thromb Res Suppl. 2007;121(1):9-16. PubMed

Rosovsky RP, Crowther MA. What is the evidence for the off-label use of recombinant factor VIIa (rFVIIa) in the acute reversal of warfarin? ASH evidence-based review 2008. Hematology Am Soc Hematol Educ Program. 2008;:36-8. PubMed

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Watson HG, Baglin T, Laidlaw SL, Makris M, Preston FE. A comparison of the efficacy and rate of response to oral and intravenous Vitamin K in reversal of over-anticoagulation with warfarin. Br J Haematol. 2001 Oct;115(1):145-9. PubMed

Primary Health Components

Stroke; intracerebral hemorrhage (ICH); international normalized ratio (INR); procoagulant reversal agent; fresh frozen plasma; recombinant factor VIIa; prothrombin complex concentrates

Denominator Description

Intracerebral hemorrhage (ICH) stroke patients with international normalized ratio (INR) value greater than 1.4 at hospital arrival (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Intracerebral hemorrhage (ICH) stroke patients treated with a procoagulant reversal agent

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Hospital Inpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Specified

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Making Care Safer
Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Safety

Data Collection for the Measure

Case Finding Period

Unspecified

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Diagnostic Evaluation

Institutionalization

Patient/Individual (Consumer) Characteristic

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Discharges with International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Principal Diagnosis Code for hemorrhagic stroke as defined in the appendices of the original measure documentation

AND

Patients who have an *Admitting Diagnosis* of primary parenchymal intracerebral hemorrhage (ICH)

AND

International normalized ratio (INR) greater than 1.4 performed closest to hospital arrival

Exclusions

Patients less than 18 years of age
Patients who have a Length of Stay greater than 120 days
Patients with *Comfort Measures Only* (as defined in the Data Elements) documented on the day of or day after hospital arrival
Patients enrolled in clinical trials
Patients with a documented *Reason for Not Administering a Procoagulant Reversal Agent* (as defined in the Data Elements)

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
Intracerebral hemorrhage (ICH) stroke patients treated with a procoagulant reversal agent

Exclusions
None

Numerator Search Strategy

Institutionalization

Data Source

Administrative clinical data

Paper medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

- Comprehensive Stroke (CSTK) Initial Patient Population Algorithm Flowchart
- CSTK-04: Procoagulant Reversal Agent Initiation for Intracerebral Hemorrhage (ICH) Flowchart

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

CSTK-04: procoagulant reversal agent initiation for intracerebral hemorrhage (ICH).

Measure Collection Name

Advanced Certification in Disease-specific Care Measures

Measure Set Name

Comprehensive Stroke Standardized Performance Measures

Submitter

The Joint Commission - Health Care Accreditation Organization

Developer

The Joint Commission - Health Care Accreditation Organization

Funding Source(s)

All external funding for measure development has been received and used in full compliance with The Joint Commission's corporate sponsorship policies, which are available upon written request to The Joint Commission.

Composition of the Group that Developed the Measure

Unspecified

Financial Disclosures/Other Potential Conflicts of Interest

Expert panel members have made full disclosure of relevant financial and conflict of interest information in accordance with The Joint Commission's conflict of interest policies, copies of which are available upon written request The Joint Commission.

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2015 Mar

Measure Maintenance

This measure is reviewed and updated by the developing organization every 6 months.

Date of Next Anticipated Revision

2015 Jul

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in April 2016.

Measure Availability

Source available from The Joint Commission Web site .

For more information, contact The Joint Commission at One Renaissance Blvd., Oakbrook Terrace, IL 60181; Phone: 630-792-5800; Fax: 630-792-5005; Web site: www.jointcommission.org .

NQMC Status

This NQMC summary was completed by ECRI Institute on May 19, 2015. The information was verified by the measure developer on June 22, 2015.

The information was reaffirmed by the measure developer on April 6, 2016.

Copyright Statement

Production

Source(s)

The Joint Commission. Disease-specific care certification program. Comprehensive stroke: performance measurement implementation guide. Oakbrook Terrace (IL): The Joint Commission; 2015 Mar. 278 p.

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